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No. V

Vicinity of Monterey in May and Early June

BY

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CALIFORNIA WATER BIRDS.—No. V.[1]

Vicinity of Monterey in May and Early June.

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CONTENTS.

The results of a study of the water birds off Monterey from May 1 to June 12, 1897, are presented in this paper, together with some reflections upon the cause of return migration and some observations upon specimens. That the birds of the harbor might be observed more fully than on previous occasions, the town of Monterey was selected as a base of operations, and from this vantage-point week-day excursions were made upon the bay and ocean, the voyages extending several miles beyond Point Pinos when the weather permitted. May proved to be a windy month and at times there were rather heavy seas. However, only on six days did wind or waves prevent the boat from reaching the ocean. With the advent of June low fogs began to prevail.

[1] 'No. I.—Monterey and Vicinity from the Middle of June to the End of August,' Proc. Calif. Acad. Sci., 2nd Ser., Vol. V, June 19, 1895, pp. 177–224, 1 map.
'No. II.—Vicinity of Monterey in Midwinter,' ibid., Vol. VI, Feb. 21, 1896, pp. 1–30, 1 map.
'No. III.—South Farallon Island in July,' ibid., Vol. VI, Aug. 29, 1896, pp. 353–366, 2 maps.
'No. IV.—Vicinity of Monterey in Autumn,' ibid., 3rd Ser., Zool., Vol. II, No. 3, Feb. 12, 1900, pp. 277–322, 1 map.

I. MIGRATION.

SUMMARY OF MOVEMENTS.

Bird Waves.—While there were fluctuations seemingly due to migration in most of the species observed, extensive movements to breeding grounds occurred only in the Loons, Bonaparte's Gull, Forster's Tern, and Northern Phalarope.

LOONS. At the time of my arrival a bird wave was apparently receding. It appeared to be composed chiefly of the three species of Loons. For several days they were numerous on the water and on May 3 there was an extensive northward flight, which expended its strength on the following day. By the 5th few were to be found anywhere.

May 12 there was a great passage of Loons in companies upon the ocean—the Pacific Loon apparently predominating. It was foreshadowed by a considerable movement on the 11th and was followed by a period of little activity from the 14th to the 19th. On the 19th and 20th many solitary ones passed north. Then for nearly a week little movement took place and stragglers increased on the water.

May 27 there was a large flight of black-throated Loons, mainly *G. pacifica*. As on the 12th, they flew in bands and passed Point Pinos without entering Monterey Bay. By the 29th this flight had subsided. Afterwards no extensive migratory movement was witnessed, although stragglers were observed to the end of my stay.

BONAPARTE'S GULL. On May 10 a migratory movement began in Bonaparte's Gulls which reached its height on the 14th and 17th, when they were abundant. After the 18th only stragglers were encountered.

FORSTER'S TERN. These Terns were plentiful from May 11 to May 14; afterwards none were seen.

NORTHERN PHALAROPE. From the 11th to the 14th of May there was a great inroad of Northern Phalaropes. They departed suddenly, from the 15th onward a few laggards only being met with—the last, June 5.

Pauses in Migration.—Northbound migrants lingered by the way to feed, Bonaparte's Gulls, Forster's Terns, Northern Phalaropes, congregating where food was plentiful. Besides halting upon the water, migrants made counter-movements. For example, May 12, when Northern Phalaropes were numerous on wing, more flocks in the vicinity of Point Pinos flew southward than northward. Again, on June 1, when Loons awing were quite common, as many went down the coast as up the coast. These instances emphasize that daily observations, recorded in detail, alone reveal the real character of the movements of the birds of a locality, this being particularly true in the summer migrations from breeding grounds in temperate regions.

During the great flight of Loons on the 12th of May, there were a few loiterers on the water in the Monterey harbor. If observation had not been extended to the ocean, these stragglers would have been all that were observed, evidencing how false an impression of migratory movements may be gained if only arrested migration is studied.

Retrograde Migration.—It was noticed that many of the Bonaparte's Gulls *in transitu* over Monterey Bay apparently came down the east shore to the harbor and then turned westward, following the south shore to Point Pinos where they headed northward, seemingly making this retrograde movement in order to sight the coast-line above Santa Cruz. It is not improbable that they came from the interior, for an extensive migration down the Pajaro Valley was observed by Mr. J. R. Chalker in May, 1889.[1]

Overflow from Southern Breeding Grounds. — Dark-bodied Shearwaters were abundant from the outset. Before my departure, it seemed that the return movement southward was beginning. Pink-footed Shearwaters were scarce until the end of May. In June they became quite abundant. Black-vented Shearwaters were absent during the

[1] 'Zoe,' Vol. IV, p. 225.

entire time of my visit, while Black-footed Albatrosses were rather common. Heermann's Gulls were rare in May, but in June they appeared in force, becoming decidedly common. Specimens examined in June seemed to have recently bred. These circumstances considered in connection with the autumnal movements[1] of this Gull and its occurrence in April on Isla Raza, Gulf of California,[2] apparently indicate that it moves northward after the breeding season, as is believed to be the case in the Black-vented Shearwater and Black-footed Albatross.[3] Not improbably the movement extends to other water birds breeding in the subtropics and tropics,[4] there being an extensive overflow to northern latitudes and great food-store after the tie to the nesting rocks is loosed.

CAUSE OF RETURN MIGRATION.[5]

"The day is passing when scientists seek to employ striking or extraordinary phenomena in the solutions of their problems; rather are they looking to that which appears insignificant and commonplace."

The summer movements from breeding grounds in temperate regions appear to be the key to the fundamental causes of migration, for these movements occur without procreative stimulus or direct pressure from winter,[6] the incentives to migration being therefore limited to narrow bounds. In the previous paper[7] facts have been presented showing that the young are guided by the old, and that the latter are directed by physical phenomena which repeated

[1] Calif. W. B. No. IV, pp. 294–299.

[2] Streets, Bull. U. S. Nat. Mus. No. 7, p. 26. (See also Nelson, N. A. Fauna No. 14, p. 23.)

[3] Calif. W. B. No. IV, pp. 305–307.

[4] There seems to be no reason for rejecting the old record of *Creagrus furcatus* off Monterey merely because of the remoteness of the nesting habitat. (Cf. A. O. U. 'Check-List,' 2nd Ed., p. 326; Rothschild and Hartert, 'Novitates Zoologicae,' Vol. VI, p. 190; Salvin, Trans. Zool. Soc. Lond., Vol. IX, p. 506.)

[5] The term return migration is employed because the first migration in each bird is from the place of its birth, the movement back to the breeding habitat being therefore a return migration.

[6] Early departure after nesting, in temperate climes, is by no means a recent discovery; it was known to Gilbert White more than a century and a quarter ago. (See letter to Daines Barrington on the Swift.)

[7] Calif. W. B. No. IV, pp. 307–312.

journeys have apparently rendered familiar. With the young educated into a knowledge of the way, heredity, as a factor in migration, is stripped of its potency—at most there remaining only an innate desire for travel and an "inherited talent for geography."[1] Under the guise of science the word heredity may harbor as great superstition as the word hibernation in an earlier period in the study of migration. Outward necessity exists for the early movements—coming winter with its failure of food. Whether old birds comprehend that they must depart early in order that the exodus migration may be a gradual depopulation is hidden from us. Supplementary migration, owing to sudden contraction in the food area, seems to indicate an intelligent appreciation of the necessity of migration. Whatever be the case, young birds might readily acquire the habit of migration by following the example of old travelers, who in youth had acquired the habit in like manner from their elders. "In its early days the developing animal is reading the paragraph of life. Every sentence mastered is built into the tissue of experience, and leaves its impress on the plastic, yet retentive brain. By dint of repetition, the results of acquisition become more and more firmly ingrained. Habits are generated; and habit becomes second nature. The organism which to begin with was a creature of congenital impulse and reaction becomes more and more a creature of acquired habits. It is a new being, but one with needs not less imperious than those with which it was congenitally endowed."[2]

In short, it is held that birds-of-the-year, inheriting probably a desire for travel and a talent for geography, learn early exodus migration from the old birds, and that habit (possibly also foresight) holds the old birds to route and period of movement, thus maintaining the adjustment to winter with its failure of food.

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[1] Cf. Calif. W. B. No. IV, p. 315.

[2] C. Lloyd Morgan on 'Instinct and Intelligence in Animals,' 'Nature,' Vol. LVII, 1898, p. 329.

Winter renders return migration as imperative as exodus migration.[1] Habit in the old birds loses none of its force through erotic promptings to return to the nesting abode. Young birds who have successfully met the difficulties of one journey are not less fitted to follow the old in the return movement. Hence, it is maintained that heredity (implying at most an innate desire for travel and a talent for geography), education of the young into a knowledge of the way, and habit in the old birds (possibly also foresight), holding them true to time and place, are the paramount inward causes[2] of the return as well as of the exodus—the two movements constituting the adaptation of the bird population to winter, northern and southern, with its failure of food.[3]

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[1] For example, the return movements in the Northern Hemisphere are necessitated, it is held, because they are integral parts of the vast movement which sways the bird population northward, relieving the pressure arising from winter in the Southern Hemisphere. The complicated system of movements composing this grand movement is believed to be the outgrowth of time. So close is the adjustment of population to the existing food-supply that stability in the established order is essential to the success of migration. (Cf. Calif. W. B. No. IV, p. 314.)

Some writers, dwelling upon the perils of the journey, envelop migration in a cloud of mystery, losing sight of the fact that it is safer for the birds to go than to stay. There are numerous ordinary undertakings in human life that are not less free from danger than avian migration. Some one has aptly remarked that it is dangerous to live.

[2] As stated in 'No. IV,' p. 315, desire for procreation may be a prompting influence in the return migration. That it is not a paramount cause is further indicated by the existence of sedentary species.

It was also affirmed in the same paper that there may be, in some species, special physiological demands as to temperature during reproduction. If it requires such nice climatic adjustment to bring the young into the world, it is remarkable that in the space of a few weeks they should be fitted for the changes of climate incident to migration. It may be, however, that a species repairs to a higher life zone not because of the peculiar food or temperature of the region, but because in the struggle room has been found nowhere else. Perhaps the solution of this whole question is to be obtained from migration to oceanic islands, such as the Long-tailed and Shining Cuckoos to New Zealand and the Turnstone and Smaller Golden Plover to Hawaii. Applying the interpretation set forth in the preceding pages, it is held that the Cuckoos in the unfolding of migration gained New Zealand as a breeding place, and the two Shore Birds gained Hawaii as a winter resort; that the young, inheriting probably a desire for travel and a talent for geography, learn the way to these habitats from the old; that habit (possibly also foresight) holds the old ones true to the way that has been learned, thus perpetuating the intricate movements forming the adjustment to winter, northern and southern, with its failure of food.

[3] While it is contended that the present conditions enforce present migration, it is not denied that the evolution of the seasons was the cause of the evolution of migration.

II. GENERAL OBSERVATIONS.[1]

Æchmophorus occidentalis. WESTERN GREBE.—A few individuals were all that were noted.

Colymbus nigricollis. EARED GREBE.—Only one small Grebe was seen, and it appeared to be this species.

Gavia imber. LOON.

Gavia pacifica. PACIFIC LOON.

Gavia lumme. RED-THROATED LOON.—On my arrival these three Loons were numerous upon the water. As they had not been molested, they had become tame at the Monterey wharf, paying little attention to the loungers or to the fishermen going and coming in their boats. By May 5 all the Loons had disappeared from the vicinity of Monterey except stragglers, a northward movement having taken place. Afterwards there were inroads of *Gavia imber* and *Gavia pacifica*, but neither became as abundant on the water as at the outset. Loiterers remained to the day of my departure. Offshore there were migratory movements —see preceding 'Bird Waves.' The last extensive one occurred May 27, when numerous bands of black-throated birds (chiefly *Gavia pacifica*) appeared from the south and passed swiftly by, heading in a northwesterly direction; off Point Pinos the line of flight of the majority was several miles at sea. *Gavia lumme* disappeared early, an adult May 8, being the last positively identified.

All the black-throated specimens secured of *Gavia pacifica* exhibited traces of the winter garb on the fore-neck. *Gavia imber* was taken in similar transitional stage and in full nuptial plumage. There were some individuals of both species in worn winter plumage. They were found chiefly on the water in the harbor, and were probably sickly birds. *Gavia lumme* was also obtained in breeding attire. At Tomales Bay a number of black-headed *Gavia imber* and

[1] Subspecific names are omitted; otherwise the nomenclature conforms to the A. O. U. 'Check-List,' second edition and eighth and ninth supplements.

chestnut-throated *Gavia lumme* were seen March 17, 1899. A female of the latter species, shot at Drake's Bay, March 16, 1898, is in high nuptial feather.

Lunda cirrhata. TUFTED PUFFIN.—May 4 several companies were seen, and afterwards individuals, at times, to the end of my stay.

White prevails so largely on the breast and abdomen of a male taken Oct. 26, 1896, that it bears a striking resemblance to a Rhinoceros Auklet.

Cerorhinca monocerata. RHINOCEROS AUKLET.—Several were met with during the middle of May.

Ptychoramphus aleuticus. CASSIN'S AUKLET.—They were observed as follows: May 27, three on the water, about three miles west of the buoy; June 5, several bands, all told about sixty individuals, resting upon the ocean three or four miles offshore; June 7, two small parties flying northward.

Cepphus columba. PIGEON GUILLEMOT.—These Auks were abundant on the water on the 3rd and 4th of May. By the 6th most had disappeared. Afterwards there were reënforcements, but they were transient, the species declining with the ebbing of the migration. Early in June all had forsaken the bay and ocean in the vicinity of Point Pinos.

An adult female from Monterey, May 27, has some white feathers on the breast and abdomen, which is likewise the case, in a lesser degree, in a female from Kadiak, Alaska, June 28.

Uria troile. MURRE.—Very few were seen at the outset, but at the end of May and in June visitors were common on some days. They were probably birds on fishing excursions from the rookeries above Santa Cruz, and not early southbound migrants.

In a male, June 4, the throat is almost wholly white, and in another specimen, May 27, it is chiefly white, both examples therein having the plumage of a winter bird-of-the-

year.[1] Several young autumn and early December birds from the vicinity of San Francisco, having the bill partially developed, resemble *Uria lomvia*. One of these is somewhat melanistic, its upper parts being brownish black. It is much darker than any other specimen in the Academy's series of forty-three old and young birds taken at various seasons. I have examined the specimen upon which Dr. Cooper based his California record of *Uria lomvia*[2] and find that it is an immature *Uria troile*. The specimen was captured and mounted by Mr. W. G. Blunt, and by him donated to the Academy. Several years ago, at my request, Mr. Blunt examined the specimen, confirming that it was the one identified by Dr. Cooper as *Uria lomvia*.

Stercorarius parasiticus. PARASITIC JAEGER.—A Jaeger, having the central rectrices acuminate, was seen May 11. It is probable that it was this species rather than *S. longicaudus*.

Larus glaucus. GLAUCOUS GULL.—An immature specimen in worn plumage is referred to *L. glaucus* instead of *L. barrovianus*, for the depth of the bill through the angle is less than the depth through the base. The specimen was secured May 4, and was with a flock of Western Gulls on the beach near the Monterey wharf.

Larus occidentalis. WESTERN GULL.—Western Gulls were abundant during the early part of my sojourn. Later, however, they were not numerous, there being no nesting colony in the vicinity.

White-headed birds are frequently seen late in fall and in winter. Generally such specimens have faint traces of markings on the head or neck.

Larus californicus. CALIFORNIA GULL.—Some half a dozen, heading northward, were seen on the ocean near the buoy May 19.

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[1] Cf. Calif. W. B. No. II, p. 21.

[2] Proc. Calif. Acad. Sci., Vol. V, p. 414; 'Auk,' Vol. III, p. 126.

Larus heermanni. HEERMANN'S GULL.—In May Heermann's Gulls were rare. In June they increased in numbers, becoming decidedly common by the second week. White-headed birds predominated.

An autumn specimen has several primary coverts on both wings abnormally white.

Larus philadelphia. BONAPARTE'S GULL.—During a gale May 1 several bands of these Gulls on migration passed the Monterey harbor. Then there was a hiatus, broken only by a few loiterers, until the 10th, when began an influx which lasted for more than a week. On the 14th and 17th it was at its height. On the former day numerous flocks occurred on the water and on the latter day an extensive flight took place, which was continued on a smaller scale on the 18th. This movement closed the northward migration of the species in the vicinity, for only stragglers were met with afterwards, a young bird, June 2, being the last one. This bird, forsaken by his fellows, had sought the companionship of the Loons in the Monterey harbor. Two days before, apparently the same bird was seen in company with some sickly American Coots that had found an asylum on a lagoon near the harbor.

White-throated birds with the tail band were in the majority, and pied-headed ones were plentiful. Nevertheless, in every flock there was a fair proportion of adults in full nuptial plumage, proving that the young are not without experienced leaders in the closing of the return migration.

Xema sabinii. SABINE'S GULL.—A fine adult male in high breeding plumage was shot May 12. These Gulls probably pass Monterey Bay in considerable numbers, for they have been found in abundance as far south as Callao Bay, Peru.[1] However, those visiting Peru may pursue the same route as the Franklin's Gulls.

Since the above was written, the Academy has come into possession of two additional specimens from Monterey Bay,

[1] MacFarlane, 'Ibis,' 5th Ser., Vol. V, p. 207.

an adult male and a young female taken Oct. 5, 1899, by Mr. Alvin Seale. Much of the nuptial hood and collar is still retained in the male.

Sterna maxima. ROYAL TERN.

Sterna elegans. ELEGANT TERN.—Six Terns of the larger kind were observed May 8 as they passed northward near the buoy. They probably belonged to one or the other of these species.

Sterna forsteri. FORSTER'S TERN.—They were plentiful during the four days following May 10. None were noted before or after this interval.

An April male from the vicinity of San Francisco has the jugulum, breast, and sides of abdomen very pale gray, in this respect resembling lighter examples of *Sterna paradisæa*. Several other April specimens are tinged with gray on these parts.

Diomedea nigripes. BLACK-FOOTED ALBATROSS.—Between May 3 and June 9 seventeen were met with. Four of these occurred May 11 and three May 28. On both occasions, mistaking us for fishermen, they came to the boat, expecting to share in the catch. One of them fearlessly alighted on the water within twenty-five feet of us. Although I shouted and threw an empty cartridge and a Murre at him, he did not take wing. In one instance, when there was a heavy sea, an individual came to the inner part of the bay near the harbor. Usually, however, they kept to the ocean, those of the 11th and 28th being fully five miles to the westward of Point Pinos. My trips did not extend sufficiently offshore to develop 'Gonies' in abundance.

Puffinus creatopus. PINK-FOOTED SHEARWATER.—Previous to May 27 comparatively few Pink-footed Shearwaters were observed. In June they became quite abundant. Males greatly outnumbered the females, which was also the case in the autumn of 1896. Individuals frequently came close to the boat, seemingly prompted by curiosity.

Several specimens (apparently adult) have the white of the under parts immaculate anterior to the lower abdomen.

Others (apparently immature) have the white more or less variegated with gray, the chin and throat being densely mottled, sparsely mottled, or faintly streaked, and the breast and abdomen, in extreme examples, transversely marked. The majority of forty-seven specimens have whitish mixed with the dark color of the lower tail-coverts.

In certain Black-vented Shearwaters (apparently immature birds) the white of the lower parts is also invaded by gray, the jugulum and throat being mottled, and in some cases the chin and fore-breast. An extreme specimen is sparsely spotted on the abdomen and posterior portion of the breast. Some specimens display considerable white on the lower tail-coverts. The chord of the longest wing, in a series of eighty-seven specimens, measures 9.6 inches.

Puffinus griseus. DARK-BODIED SHEARWATER.—From the outset, these Shearwaters were abundant. On several occasions large numbers were congregated on the water feeding. During a dense fog on the morning of June 2, and again on the morning of the 3rd, many in going down the coast passed within a few hundred yards of the Monterey wharf, illustrating the deflecting influence of low fogs upon movements.

In a series of eighty-three specimens, several have the chin and anterior portion of the throat white, more or less obscured by gray. The breast in some specimens presents a decidedly mottled appearance, the feathers being extensively white or whitish. Two specimens are albinistic; one of them has much of a greater covert white, and the other has the throat largely white. A bird having white on the scapular region was seen, but not captured.

Oceanodroma homochroa. ASHY PETREL.—A few small Petrels, seemingly this species, were seen June 5 as they winged their way northward over the ocean.

Phalacrocorax dilophus. DOUBLE-CRESTED CORMORANT. —Only on one occasion, May 4, was this species satisfactorily identified.

In a female, Feb. 22, the jugulum and breast are white, relieved by a few brown feathers, some of them very dark; the abdomen is variegated with light and dark brown and whitish. Another female, March 14, has the fore-breast brownish white in sharp contrast with the dark color of the posterior lower parts.

Phalacrocorax penicillatus. BRANDT'S CORMORANT.—Visiting Seal Rocks May 14, I found that the nesting was just commencing. A few nests had nearly reached completion, and several of these contained incomplete sets of eggs. In most cases, however, construction had advanced no further than starting the foundation. The rookery appeared to be larger than in 1894, having encroached upon the portion of the islet exposed to view from the land. About the bay, Shags were abundant.

The nuptial filaments are about half-grown in an adult female of Feb. 28. Six July birds (three of each sex) have the lower parts largely greenish brown, somewhat mottled in appearance. The upper parts in five of them are greenish brown, tending toward bottle-green. With one exception, all these brown birds possess at least traces of nuptial filaments.

Phalacrocorax pelagicus. PELAGIC CORMORANT.—At first they were very common on the bay, but as the breeding season drew near all disappeared save a few stragglers.

Besides the adults in fine feather, there were a few in worn brown dress, apparently diseased birds. An individual of this kind, taken May 7, has traces of the mature plumage. Its generative organs showed no functional enlargement. A female, Dec. 28, has indications of the white flank-patches and filamentous feathers of the neck.

Pelecanus californicus. CALIFORNIA BROWN PELICAN.—They were not common until June. Both white- and dark-breasted birds were present.

A male, Feb. 4, from Mazatlan, Mexico, has the entire feathered portion of the head straw yellow.

Merganser serrator. RED-BREASTED MERGANSER.—Four individuals were met with—the last one May 25.

In a female, April 3, the white of the chin and throat is mottled with brownish black, the black prevailing over the white on the lower throat. A brownish black patch surrounds each eye.

Histrionicus histrionicus. HARLEQUIN DUCK.—A female, with bleached wing and tail feathers, was shot May 25.

Oidemia deglandi. WHITE-WINGED SCOTER.—Four were seen on the 5th of May and six on the 10th. All were flying up the coast.

Oidemia perspicillata. SURF SCOTER.—At intervals, up to the 24th of May, loiterers were quite common off the sandy beach above the Monterey wharf. One was seen as late as June 12.

Ardea herodias. GREAT BLUE HERON.—May 31 being too windy for a trip upon the bay, I visited the Monterey lagoon, finding, besides a few other water birds, a Great Blue Heron.

Nycticorax nycticorax. NIGHT HERON.—On the day of my visit to the lagoon, a little company of these Herons occupied the live-oaks overhanging the water.

Fulica americana. AMERICAN COOT.—About a dozen Mud-hens were also at the lagoon on May 31. A male and three females were taken, and were in worn and faded plumage. They appeared to be sickly birds.

Phalaropus lobatus. NORTHERN PHALAROPE. — Not many were noticed during the first ten days of my stay, but on May 11 there was an influx, and for four days they were abundant. During the forenoon of the 14th, several great flocks were assembled with Bonaparte's Gulls on the ocean near Point Pinos. They were apparently feeding on tunicates, which abounded in an 'oil-slick.' There were adults

as well as immature birds in these gatherings, evidencing that the young do not lack the guidance of the old in the closing movements of the return migration. After May 14 only a few stragglers were encountered. Two on June 5 were the last. One of these was shot, and had the testes of a breeding bird. In 1894, southbound Northern Phalaropes arrived July 11 (Calif. W. B. No. I, pp. 187, 223), the interval between the two migrations at Monterey being therefore but little over a month.

Except in the case of lost or diseased birds, the presence of boreal species in the summer months in the region below the breeding habitat is seemingly explained by late return and early exodus migration.

The shore was not patrolled, so little was learned of the waders frequenting the beaches and surf-beaten rocks. The following were met with: Sanderling (a large flock May 19), Wandering Tatler (call-notes heard May 8), Black Turnstone (common May 8), Black Oyster-catcher.

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